

Analysis of the Impact of Fiscal Policy on Unemployment in Nigeria: ARDL Bound Test and ECM Approach

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Abstract:- The paper sets out to analyse the impact of fiscal policy on unemployment in Nigeria for the period of 1986 –2022, using secondary datasourced from Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics Annual Report. The study adopted ARDL model and Error Correction Model to achieve the objectives. The model diagnostic checking included; heteroskedasticity test, autocorrelation, normality test and stability test were established. The results depicted that recurrent expenditure has positive relationship with unemployment rate and it is statistically significant in the current period. But in period one and two, recurrent expenditure possessed negative and significant effect on unemployment in the short run. While, recurrent expenditure has positive and significant impact on unemployment rate in the long run. Capital expenditure revealed negative but insignificant effect on unemployment in the short run, though in the long run, capital expenditure has positive and insignificant impact on unemployment. Government revenue has negative and significant impact on unemployment. And, in the long run, government revenue has a negative and significant impact on unemployment in Nigeria. Public debt servicing has a negative and significant effect on unemployment in Nigeria. Based on these results, this study suggests that government should diversify and invest in the non –oil sector and borrowed funds should be used for productive purpose as this has the potential of increasing employment. Also, government should properly handle or manage recurrent expenditure, capital expenditure, government revenue and public debt servicing in order to control unemployment in a way that would ensure economic development in Nigeria.

Keywords:- Recurrent Expenditure, Capital Expenditure, Government Expenditure, Public Debt Servicing, Unemployment.

I. INTRODUCTION

The main goal of macroeconomics globally is to curtail unemployment to the beeriest minimum. Other macroeconomic objectives comprise: growth and economic development, stable and sustainable economy, equilibrium balance of payment, price stability, productivity growth, inflation control, equitable distribution of income and sound

structure to public finance. One of the most important policies to achieve macroeconomic objectives is by using fiscal policy. Therefore, the fiscal policy is concerned with the use of government revenue, government expenditure and public debt servicing is to determine the required level of economic activities which are the most important causes of economic fluctuations such as economic development issues like unemployment and unbalance of payment. Hence, our main purpose of fiscal policy is to reduce unemployment. Therefore, proper policy to address the increased level of unemployment in any economy becomes mandatory as the high level of unemployment is a sign of underdevelopment. A extreme feature of Nigeria's fiscal policies over the past three (3) or four (4) decennaries is that expenditures surpass revenue (Ewubare&Obayori, 2015). Fiscal policy is the actions taken by the economy to implement budget policies, such as revenue and expenditure policies, as well as the issuance of public debt instruments and public debt management. At the same time, Oloye (2012) opined that the development of budget deficits is mostly was discovered from the Keynesian stimulated public expenditure that led to growth in 1970s. Nigerian Debt Management Office showed that the federal government between 2015 and 2021 debt service payments reached N14.86trillion and accumulated revenue was N25.43 trillion. The World Bank revealed in its International Debt Report (IDR) depicted that Nigeria's foreign debts rose highly by 305% in 12 years.

Nigerian government expenditure is primarily divided into two categories: capital and recurrent expenses. Recurrent expenses are spent on commodities purchases, paying salaries and wages, and remitting depreciation on fixed assets. Capital expenditures, on the other hand, are payments made for the purchase or upkeep of immovable property that is fixed assets (new or used).

Public debt servicing is the total of principal repayments and interest need to be settled on long term bonds of public debtors and long-run private obligations guaranteed by a public institution. (World Development Indicators, 2021). In Nigeria, according to National Bureau of Statistics (NBS), data show that the level of expenditure recorded was N839 million in 1970, greatly exceeded to N5 billion in 1970 and then increased to more than N 14.0 billion in 1980. Also, available statistical data show that fiscal policy and its components (capital and recurrent) have

continued to rise for the past three or four centuries. For example, public spending has increased from N16.2billion in 1986 to N701.1billion in 2000, to N4,194.6billion in 2010, N4,605.3 billion in 2012, also in 2018 total government expenditure increased to 7,813.7billion, to 10,164.6billion in 2020(CBN, statistical bullet 2020). Similarly, the breakdown of government expenditure reveals that both capital and recurrent expenditure have grown over time, with recurrent expenditure accounting for a higher share of overall expenditure than capital expenditure.

Many issues have disrupted Nigeria's economy in the past few years. Among the difficulties include embezzlement or mismanagement of public finances (Okemini and Uranta, 2008); unsuitable and inefficient policies (Anyanwu, 2007); financial mismanagement; and ineffective economic policies (Gbosi, 2007). The biggest problem Nigeria faces today is its inability to manage its labour force.

Over the years there has been efforts addressing the issue of unemployment in Nigeria. In 1986, the government introduced National Directorate of Employment (NDE) program aimed at creating employment opportunities for the youth, thus reducing the incidence of unemployment in the economy. There are also other economic developmental program which include: Rural Electrification Agency (REA) was launched in 2006, Rural Banking System in 1977, Agricultural Development Program (ADP) which was started in 1972, National Poverty Alleviation Program (NAPEP) in 2001, Family Support Program (FSP) was initiated in 1994, N -Power was established in 2015 etc. Despite all these government's creditable efforts to address the issue of unemployment, lack of job remains as a major problem (Joseph, 2016).

In order to solve the issue of excess labour in Nigeria and drive the country's economy toward sustainable growth and development, it is necessary to employ the tools of fiscal policy, namely government expenditure, government revenue, and public debt payment. This paper's primary goal is to analyze how fiscal policy instruments affect Nigeria's unemployment rate. The study specifically looks at how Nigeria's unemployment rate is affected by capital expenditures, government revenue, and public debt payments. The paper is divided in to five sections namely: The introduction, conceptual issues, theoretical and empirical literature review, methodology, findings and discussions, conclusion, and suggestion are the five components that make up the article.

II. LITERATURE REVIEW

A. Conceptual Issues

Ahuja (2014) defined the concept of fiscal policy as tax, public expenditure and government borrowing. A potent tool that the government may use to accomplish the larger objective of macroeconomic development is fiscal policy. In a similar vein, fiscal policy is described by the World Bank (2014) as a way for the government to regulate taxes and spending in order to accomplish predetermined objectives.

According to the definitions given above, fiscal policy is the process by which the government uses taxes, spending, and borrowing to set the direction of economic activity and to monitor changes in employment, productivity, and aggregate demand.

Fiscal policy includes the regulating the economy through tax revenue and the ability to spend money to achieve certain desirable economic goals among which are full-time employment (Medee&Nembee, 2011).

All government investments and consumption are included in government expenditures, but state transfer payments are not included. (Barro&Grilli, 1994). If the government is unable to create or acquire fixed assets, it will instead spend short-term money on recurrent expenditures. They are the expenditures that are most often used to run government affairs on daily basis. It includes government expenditure on salaries, wages, interest payments e.t.c. Mostly do not bring return and the economic impact is only in the short run.

Capital expenditure is the payment of non-financial assets used in production for more than one year and recurring expenditure are payments for non-financial services within a year (CBN, 2003). Government expenditure is outlay of public authorities at all government levels. Capital expenditure is a supplying of resources from government to other sectors of the economy whether needed or unneeded (2010)

Taxes and money from administrative activities such as penalties, fees, donations, and grants are examples of revenue-generating activities. Tax and nontax revenue are the two categories into which government revenue may be divided (Illyas& Siddiqi, 2010). All money received by the government, including taxes, customs fees, earnings from state-owned businesses, capital gains, and money from outside sources, is referred to as government revenue.

Public debt servicing is the Public debt servicing is the total of principal repayments and interest need to be settled on long-run agreement of public debtors and long-run private obligations guaranteed by a public institution. (World Development Indicators, 2021).

Unemployment is a situation where people who fall into working age, who are able and willing to work are unable to find suitable employment with the current wage. The total number of economically active people who are jobless while they are looking for work is known as unemployment; this group includes those who have quit their jobs willingly as well as those who have lost their jobs (World Bank, 1998).

B. Theoretical Literature Review

➤ *Classical Theory of Fiscal Policy*

The Classical economists especially Adam Smith encouraged little government interventions to provide public goods, law and order and those investment that could not be adequately given by the private sector due to high risk or non-profit nature (Jibir & Aluthge2019). This doctrine dominated the world economies until the Great Depression of the 1930's which exposed failure of the classical system.

➤ *Keynesian Theory of Fiscal Policy*

Keynesian economists contend that fiscal policy is a crucial tool for economic management. Maintaining full employment in the economy is largely dependent on the role played by the government. This is accomplished by regulating the economy's aggregate demand level until full employment is achieved. Thus, when government expenditure rises, the requirement for aggregate demand grows as a result of a progressive reduction in personal income tax and an increase in disposable income. Spending by the government is a part of aggregate demand, nevertheless. According to the equation below:

$$Y=C+I+G+(X-M).....(2.1)$$

Where;

Y = aggregate demand,

C = consumption,

I = investment,

G = government expenditure,

X = Export,

M = Import

X-M = net export.

From the above equation, a well-expanded and integrated fiscal policy will help create jobs in the country. This is done by increasing government expenditure in the country through the development of an appropriate policies by government. For full employment, the government raises taxes on non-manufactured commodities in the area as a way to increase revenue. In contrast, the government provides tax reduction for domestic producers in order to increase the volume of exports to pay for imports. In addition, tax reductions are way to boost domestic production and create jobs as well as reduce imports. Therefore, the increase in government expenditure encourages a large volume of exports that will also reflect the value of the country's currency. Also, in the Keynesian view, effective demand which results in to increased output, this output generates revenue and the revenue provides employment. Keynes regarded employment as a function of income.

➤ *The Theories of Unemployment*

• *Classical Theory of Unemployment*

The role of money in explaining transient fluctuations in the country's production was highlighted by the classical school. This theory often takes an aggregate approach, viewing involuntary unemployment as a short-term event that illustrates the connection between wage and price levels and explaining how high real wages lead to unemployment. Aside from the frictional kind of unemployment, there are other circumstances in which the pay level in the traditional conceptions might decrease and result in unemployment.

• *Keynesian Theory of Unemployment*

Demand deficient or cyclical unemployment, commonly referred to as Keynesian unemployment, happens as soon as aggregate demand (AD) declines. Demand-deficient or cyclical unemployment is the term for unemployment that results from shifts in the business cycle. It may also be persistent, as it was during the Great Depression of the 1930s. Cyclical unemployment rises quickly when the economy is weak. Keynes disagreed that there is this kind of unemployment because there isn't enough demand. Since most product demand declines, output declines as well, but salaries rise anyway, creating an imbalance that leads to significant unemployment.

➤ *Austrian School of Thought and the New Classical Economics.*

Austrian School have the same perspective as classical economics and consider supply and demand dynamics to be dependable ways to address unemployment. The government and unionization are two examples of external labour market actions that the schools advocated against.

➤ *Marxist Theory of unemployment*

Marxists hold a Keynesian understanding of the relationship between economic demand and employment, but they caution that this relationship must be maintained because wage cuts and lower labour participation in the production market are potential consequences of the market system, which must lead to a reduction in overall economic demand and the consequent problems of unemployment and periods of low economic activity prior to (investment) for economic growth.

The problem of unemployment is unavoidable and as compulsory part of the capitalist process, and recovery and re-growth are also part of the process. On the surface, unemployment appears to be ineffectual as jobless workers do not boost profits, but in the context of the global capitalism system, unemployment is advantageous since it reduces owners' perceptions of the high salaries. By producing wealth, the proletariat works to further the interests of the capitalists. Marx believed that a welfare economic system would be the only way to totally eliminate unemployment, along with any associated mechanisms and a system of mandatory competitive salaries. The constant rise in unemployment, according to modern Marxists, is proof that capitalism has failed to achieve full employment.

➤ *Efficiency Wage Theory of Unemployment*

The theory takes a wide stance in explaining unemployment. According to the hypothesis, workers vary in quality and ability (some are lazier than others), are unlikely to put in as much effort, and need expensive, careful supervision. Employers are concerned with minimizing employee wage rates, which are based on worker productivity. One way to do this is by raising compensation in order to boost productivity. Second, the employer has the right to fire any employee who exhibits laziness and replace them with more capable candidates.

C. Review of Empirical Literature

Bidemi (2016) examined how government expenditure affected Nigeria's unemployment rate. The Error Correction Model (ECM) integration approach was used in the investigation. According to the empirical findings, public spending accounts for around 73% of variations in the unemployment rate over the long term. Additionally, the influence of capital expenditure and recurring factors on the unemployment rate. The t-statistics' statistical significance at the 5% level explains this. The Error Correction Model (ECM) indicates that there is a long-term link between fiscal policy and unemployment. According to the study, fiscal policy that is more expansive should be supported since it is crucial for economic growth. To enhance the caliber of public expenditure, an appropriate combination of fiscal policies should also be in place.

Using OLS rating, Binuomoyo (2020) investigated the relationship between government spending on education and unemployment in Nigeria and discovered that government spending on education was not necessary to address the problem of unemployment. Thus, the result clearly indicates that our society should support the focus on a specific area of skill development that may be attained by coordinated investment and innovation related to information technology.

Hence, the authorities should therefore take into consideration effective policy support for better education and training units as being operated in South Africa, in order for them to flourish and duly recognize as work-acceptable qualifications, in cooperation with the nation's national certification system as an institutional model in human capital development. This is because it is recommended that ordinary schooling is globally unable to solve this type of knowledge required based on this.

Onadoga et al. (2017) used regression estimates with yearly data from 1980 to 2013 to investigate the relationship between public spending and unemployment in an emerging market. They discovered that daily spending was statistically insufficient to have the same stimulant effects on unemployment as capital project and private sector spending, both in the short and long terms. The R² (0.84) indicated that changes in the independent variables accounted for a larger share of the overall fluctuations in unemployment. Autocorrelation, heteroscedasticity, and Multicollinearity are likewise absent. The study suggested, among other things, that the share of capital expenditure in

Nigerian budget should be increased while that of recurrent expenditure should be decreased; and competition among investors by eliminating trade tariffs should be increased and public sector should put in place policies that will motivate private investment.

Selase (2019) used a panel dynamic analysis approach (PDAA) to examine the impact of government spending on unemployment in several African countries. The study used GMM techniques for empirical analysis, which revealed that while spending on defense and health increases unemployment rates, spending on social amenities and education lowers unemployment levels. The brief report showed that expenditure on social amenities and education reduced the unemployment rate by 1.9 and 1.8%, respectively. The unemployment rate rises by 5.2% and 84.5% with every 1% increase in defense and health spending, respectively. Long-term elasticity of social amenities and education spending reduces unemployment by 3.8% and 7.89 percent, respectively, whereas long-term elasticity of defense and health spending raises unemployment by 22.22% and 36.458 percent, respectively in some of African countries. Therefore, the study suggested a drastic approach to further upgrade the education section by full investment in education that will help in human capital development.

Attamah et al. (2015) used the Ordinary Least Square (OLS) approach (managerial economics views) to explain how fiscal and monetary policies affected Nigeria's unemployment issue. The findings showed that whereas government expenditure positively correlated with Nigeria's unemployment issue, government revenue had a negligible and negative impact on unemployment. It was discovered that the country's unemployment issue is positively and significantly impacted by the money supply and interest rate in terms of monetary policy. Consequently, the study also showed that rising interest rates and exchange rates contribute to unemployment by driving up production costs, which deters the private sector from hiring significant numbers of workers. Increases in interest rates and exchange rates make unemployment worse by raising manufacturing costs, which depresses the private sector from taking large labour. However, the real GDP, which is a measure of national income, significantly and negatively impacted Nigeria's unemployment rate. The paper's conclusion proposes that, in order to effectively address Nigeria's unemployment issue, plans should be structuredly diverted; as a consequence, a greater emphasis should be placed on pursuing entrepreneurship development and increasing productivity. The public should also place a high priority on economic development, job creation, and investment.

Abubakar (2016) explained the dynamic effect of fiscal policy on output and unemployment in Nigeria. The approach employed in the study was Structural Vector Auto Regression (SVAR) with long run constraints, which was initially suggested by Blanchard and Quah (1989). The study discovered that production and public spending both served to increase productivity. Nonetheless, public spending has a greater impact. In terms of the

unemployment component, revenue is shown to temporarily reduce unemployment, but government spending has no discernible impact on unemployment. The effect of governmental spending on unemployment was negligible.

The study suggests among others that since public expenditure is found to be increasing national income, the government should consider adjusting its expenditure pattern by channeling more towards productive expenditure such as capital projects; this will have the impact of both stimulating output, growth and reducing unemployment.

Using an OLS estimate, Ekong et al. (2018) examined the relationship between fiscal policy and unemployment: the Nigerian dilemma. The analysis indicated that, over time, government spending, foreign debt, inflation, and exchange rates all had a positive association with unemployment; the only factor that was shown to have a negative link with unemployment was government revenue. Nonetheless, government spending and foreign debts temporarily lowered the unemployment rate; however, the rate of inflation, the rate of exchange, and government revenue were positively correlated with unemployment, making it worse. According to the study, borrowed money should only be utilized for the specified, beneficial reasons. To make sure that every resource spend is worthwhile, strict project management should be implemented for government initiatives. The combating misuse of public fund must be confirmed to reinstate balance into the country and accountability in the use of public funds. There is also need to convert the economy into a productive center, it will curtail the rate of foreign borrowing, high persistent rise in price and stimulate economic exchange rate policy. Liberal taxes is needed so that it will encourage investment and other productive economic activities.

Iwuoha (2020) wrote on the government's debt and how it may be used to offset Nigeria's rising unemployment rate. The VECM technique was used. The study's conclusion was that public debt hasn't had much of an impact on Nigeria's efforts to combat unemployment. According to the report, public debt should be utilized to boost the economy and create employment. It also recommended that the use of borrowed funds be guided by clarity. Instead than depending mostly on borrowing, Nigeria's economy has to be more diversified in order to investigate alternative sources of income. When repaying debt consumes a larger portion of the nation's income, it is insufficient, especially given the sharply rising unemployment rate in Nigeria.

While we do not completely prohibit the government from borrowing to provide essential social amenities, financial mismanagement needs to be eradicated in order to enable the amount of borrowing to be determined by the availability of infrastructure, keeping in mind the detrimental effects of significant borrowing on the economy. It is best to avoid borrowing for consumption at all costs. Therefore, research on the effects of corruption on large-scale borrowing in Nigeria should be the focus of future studies.

Okeoma and Onyebuchi (2022) investigated the relationship in Nigeria between state indebtedness, unemployment, and poverty. Using an unconstrained vector auto-regression model, the study examined the period from 1981 to 2021 and discovered that while loans had no discernible impact on poverty, they do have an impact on Nigeria's unemployment rates. In example, the majority of state debts accrued during the course of the study were not expected to spur economic development, which may be partially accounted for by the fact that the majority of borrowings were used to fund trade imbalances. According to the study, in order to ensure that borrowing stays under the internationally advised threshold for industrialized nations such as Nigeria, the current debt ratio for domestic production should be kept at less than 20% for domestic manufacturing should be kept up to ensure that borrowing stays within the bounds of what is globally advised for developed nations such as Nigeria. Additionally, future government borrowing need to be directed toward particular economic sectors that are productive and would promote long-term growth in terms of reducing poverty and creating jobs.

III. METHODOLOGY

The statistical approaches used in this work are the Error Correction Model (ECM) and the Autoregressive Distributed Lag (ARDL) Model. The Central Bank of Nigeria Statistical Bulletin provided the time series data on recurrent expenditure, capital expenditure, government revenue, and public debt servicing for the years 1986–2022. The National Bureau Annual Report included the unemployment rate statistics.

Fiscal policy has implication on unemployment. In this paper, changes in unemployment is conceptually the function of changes in fiscal policy tools (recurrent expenditure, capital expenditure, government revenue and public debt servicing). Thus, this study conceptualizes the impact of Fiscal Policy Tools (RECEX=recurrent expenditure, CAEX=capital expenditure, GTREV=government revenue and DBS= public debt servicing) on unemployment (UUNE). Therefore, we specify a simple linear equation as follows:

$$UUNE = f (FPT) \dots\dots\dots(3.1)$$

Where;

UUNE = Unemployment

FPT= Fiscal policy tools

Note that:

UUNE is defined as unemployment.

FPT comprises of recurrent expenditure, capital expenditure, government revenue and public debt servicing

From equation (3.1) above, FPT impacts on UUNE which is caused by changes in RECEX, CAEX, GTREV and DBS

If we transform equation (3.1) into linear regression model we will have:

Thus,

$$UUNE_t = f(RECEX_t + CAEX_t + GTREV_t + DBS_t) \dots \dots \dots (3.2)$$

UNNEt = Unemployment

CAEXt = Recurrent Expenditure

RECEXt = Capital Expenditure

GTREVt = Government Revenue

DBSt = Public Debt Servicing

From the above equation (3.2), we define the econometrics model as follows:

$$UUNE_t = \beta_0 + \beta_1 RECEX_t + \beta_2 CAEX_t + \beta_3 GTREV_t + \beta_4 DBS_t \dots \dots \dots (3.3)$$

β_0 is the parameter which represents the intercept. The intercept coefficient depicts the rate at which unemployment will change independently.

$\beta_1, \beta_2, \beta_3$ and β_4 = slope coefficients showing the rate of change in the value of Unemployment, when there is a unit change in Recurrent Expenditure, Capital Expenditure, Government Revenue and Public Debt Servicing. The a priori expectation of $\beta_1, \beta_2, \beta_3$ and β_4 will be negative. This is based on the Keynesian theory of fiscal policy that Recurrent Expenditure, Capital Expenditure, Government Revenue and Public Debt Servicing are expected to negatively and significantly impact on unemployment. Therefore, from the Keynesian theory $\beta_1, \beta_2, \beta_3$ and $\beta_4 < 0$, this conform with the a priori expectation been set in the studies conducted by Davies, *et al* (2022).

μ_t = Error term that shows other external factors that might affect the level of Unemployment which are not stated in the model. In order to measure the rate of variation in unemployment in response to absolute unit change in Recurrent Expenditure, Capital Expenditure, Government Revenue and Public Debt Servicing we transformed equation (3.3) into double –log model in the following form:

$$LNUUNE_t = \beta_0 + \beta_1 LNRECEX_t + \beta_2 LNCAEX_t + \beta_3 LNGTREV_t + \beta_4 LNDBS_t + \mu_t \dots \dots \dots (3.4)$$

The ARDL method is the estimation of restricted error correction (EC) version of the ARDL model. The ARDL model for this study is specified as follows:

$$UUNE_t = \beta_0 + \beta_1 RECEX_t +$$

$$\beta_2 CAEX_t + \beta_3 GTREV_t + \beta_4 DBS_t + \varphi_1 UUNE_{t-1} + \varphi_2 RECEX_{t-1} + \varphi_3 CAEX_{t-1} + \varphi_4 GTREV_{t-1} + \varphi_5 DBS_{t-1} + \mu_t \dots \dots \dots (3.5)$$

By converting all variables of Equation (3.7) into the natural log in order to quantify the level of unemployment variability in response to absolute unit change in fiscal policy tools, the model is designed below:

$$\ln UUNE_t = \beta_0 + \beta_1 \ln RECEX_t + \beta_2 \ln CAEX_t + \beta_3 \ln GTREV_t + \beta_4 \ln DBS_t + \varphi_1 UUNE_{t-1} + \varphi_2 RECEX_{t-1} + \varphi_3 CAEX_{t-1} + \varphi_4 GTREV_{t-1} + \varphi_5 DBS_{t-1} + \mu_t \dots \dots \dots (3.6)$$

$$\Delta \ln UUNE_t = \beta_0 + \sum_{i=1} \beta_1 \Delta \ln RECEX_t + \sum_{i=1} \beta_2 \Delta \ln CAEX_t + \sum_{i=1} \beta_3 \Delta \ln GTREV_t + \sum_{i=1} \beta_4 \Delta \ln DBS_t + \varphi_1 UUNE_{t-1} + \varphi_2 RECEX_{t-1} + \varphi_3 CAEX_{t-1} + \varphi_4 GTREV_{t-1} + \varphi_5 DBS_{t-1} + \mu_t \dots \dots \dots (3.7)$$

In equation (3.9) above, $\beta_1, \beta_2, \beta_3$ and β_4 represent the short-run coefficients (elasticity's) of the ARDL model represent the short-run coefficients (elasticity's) of the ARDL model, while $\varphi_1, \varphi_2, \varphi_3$ and φ_4 represent the long-run coefficients (elasticity's) of the ARDL model. β_0 represents the constant term and μ_t shows the disturbance term.

When the variables of interest are cointegrated, the long run relationship is estimated by using the conditional ARDL model being specified as follows:

$$UUNE_t = \beta_0 + \varphi_1 \ln UUNE_{t-1} + \varphi_2 \ln RECEX_{t-1} + \varphi_3 \ln CAEX_{t-1} + \varphi_4 \ln GTREV_{t-1} + \varphi_5 \ln DBS_{t-1} + \mu_t \dots \dots \dots (3.8)$$

Following this, the short-run dynamic relationship of the model is estimated using the Error Correction Model (ECM), which is also specified as follows:

$$\Delta \ln UUNE_t = \beta_0 + \sum_{i=1} \beta_1 \Delta \ln UUNE_t + \sum_{i=1} \beta_2 \Delta \ln RECEX_t + \sum_{i=1} \beta_3 \Delta \ln CAEX_t + \sum_{i=1} \beta_4 \Delta \ln GTREV_t + \sum_{i=1} \beta_5 \Delta \ln DBS_t + \varphi ECM_{t-1} + \mu_t \dots \dots \dots (3.9)$$

IV. RESULTS AND DISCUSSION

A. Test of Stationary

The Augmented Dickey-Fuller test was employed to verify if the variables were stationar. The variable has a unit root, which is the null hypothesis (H0). If, at the 5% significance level, the absolute t-statistic is more than the test critical values and the P-Value is less than 0.05%, then the hypothesis is rejected (H0). Below are the test findings for the independent and dependent variables:

Table 1 Results of the Augmented Dickey-Fuller Test for the Unit Root Test

Variables	T-Statistic	Test Critical Value at 5%	Prob. Value	Order of Integration	Remark
D(LNUNNE)	-5.518519	-3.544284	0.0004	I(1)	Reject H ₀
D(LNRECEX)	-5.866152	-3.544284	0.0001	I(1)	Reject H ₀
D(LNCAEX)	-5.821830	-3.544284	0.0002	I(1)	Reject H ₀
D(LNGTREX)	-6.287631	-3.544284	0.0000	I(1)	Reject H ₀
LNDBS	-3.687025	-3.540328	0.0363	I(0)	Reject H ₀

Source: Computation Output of E-views 10

The result above demonstrates the stationary nature of the variables at first difference and levels. D(LNUNNE), D(LNRECEX), D(LNCAEX), and D(LNGTREX) are stationary at order I(1), although just one variable, LNDBS, is stationary at levels I(0). We will continue to use the Auto Regressive Distributed Lag (ARDL) approach to estimate the variables in light of this changed order of integration.

B. Determination of Optimal Lag Length

Table 2 Optimal Lag Length Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-128.0027	NA	0.001720	7.823689	8.048153	7.900237
1	-21.77426	174.9645*	1.47e-05*	3.045545	4.392334*	3.504839*
2	2.621340	33.00582	1.69e-05	3.081098	5.550210	3.923136
3	29.19834	28.14035	2.04e-05	2.988333*	6.579770	4.213116

Source: Computation Output of E-views 10

* indicates lag order selected by the criterion

From the results above, AIC is selected, at lag length of 3.

C. Short Run Estimate

Dependent Variable: UNNNE

Method: ARDL, Sample (adjusted): 1986-2022

Table 3 Short Run Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNRECEX	0.521832	0.162004	3.221106	0.0043
LNRECEX(-1)	-0.363258	0.172521	-2.105582	0.0481
LNRECEX(-2)	-0.673786	0.185004	-3.642006	0.0016
LNCAEX	-0.176955	0.106563	-1.660565	0.1124
LNCAEX(-1))	-0.228865	0.136142	-1.681073	0.1083
LNGTREX	0.336531	0.148618	2.264406	0.0348
LNGTREX(-1))	0.641219	0.161021	3.982198	0.0007
LNGTREX(-2))	0.440518	0.162941	2.703540	0.0137
LNDBS	-0.411732	0.125951	-3.268972	0.0038
CointEq(-1)*	-0.415189	0.063305	-6.558504	0.0000
R ²	0.686839		Durbin-Watson stat	2.237410
AdjustedR-square	0.586627		Prob(F-statistic)	0.000000
F-statistic	39.10938			

Source: Computation Output of E-views 10

The statistical significance of the short-term positive link between the recurrent expenditure coefficient value of 0.521832 and the unemployment rate is shown by its probability value of 0.0043, which is less than 0.05% in the present time. This suggests that a 1% increase in ongoing expenses will result in a short-term increase in the unemployment rate of 0.521832%. However, the impact is negative and substantial in periods 1 and 2, as indicated by the coefficients of recurrent expenditure that have signs of -0.363258 and -0.673786, respectively, and probability values of 0.0043 and 0.0481 that are below the threshold

value of 0.05. It suggests that throughout periods 1 and 2, the unemployment rate decreases as recurrent spending (LNRECEX) rises by 0.363258% and 0.673786%, respectively. This confirms our a priori expectation.

The coefficient for capital expenditure (LNCAEX) is negative (-0.176955). The fact that the P-value (0.1124) is higher than the 0.05 level of significance indicates that capital expenditure has a negative but insignificant impact on unemployment (LNUNNE). Consequently, throughout the current research period, a one percent change in the

(LNCAEX) will result in a short-term drop in the unemployment rate of 0.18%. The first period's interpretation of the results is still valid. This is consistent with the theoretical a priori expectation.

The coefficient for government revenue (LNGTREX) is positive (0.336531). Given that P-value (0.0348) is less than 0.05 level significant, this indicates that government revenue has a positive and substantial influence on unemployment (LNUNNE). It suggests that during the present time, a one percent change in LNGTREX will result in a 0.336531% rise in the unemployment rate. LNGTREX does, however, have a negative and significant impact on unemployment in period 1. The Keynesian theoretical expectation is met by this.

The independent variable, public debt servicing, has a negative coefficient of -0.411732. Given that the P-value(0.0000) is less than the 0.05% threshold of significance, this indicates that the payment of public debt has a substantial and negative effect on (LNUNNE) unemployment. As a result, a one percent rise in LNDBS will short-term lower the unemployment rate by 0.411732%. Given that the P-value(0.0000) is less than the 0.05% threshold of significance, this indicates that public debt servicing has a negative and substantial impact on (LNUNNE) unemployment. Thus, in the short term, a one percent change in LNDBS will result in a 0.411732% decrease in the unemployment rate. Furthermore, this

matches our theoretical a priori anticipation. The R-squared (R²) in Table 4.4 is 0.686839. Thus, government capital, government revenue, public debt servicing, and total recurrent spending account for 67% of the systematic fluctuation in the unemployment rate. R-squared adjusted is 0.586627. This suggests that fluctuations in the explanatory factors account for around 59% of the changes in the explanatory variable. The factors not included in the model could be associated with the remaining 41 percent. The F-statistic of 39.10938 indicates that the entire model is also significant at the 5 percent significance level. This demonstrates that there is a strong correlation between Nigeria's unemployment rate throughout the research period and fiscal policy instruments.

At the five percent significance level, the ECM coefficient is statistically significant and appropriately signed, (-0.415189) It indicates that the long-run equilibrium has been reached by adjusting the short-run dynamic. With a Durbin Watson statistic of 2.24, the residuals do not exhibit autocorrelation. According to the test, there is no cointegration between the variables, which is the null hypothesis (H₀), If the computed F-statistic is greater than the Test critical value at the upper bound I(1), the null hypothesis (H₀) must be rejected.

D. ARDL Long Run form and Bounds Test

Null Hypothesis: No levels relationship exist

Table 4 Result of ARDL Long Run Form and Bounds

Test Statistic	Value	Significant	I(0)	I(1)
F-statistic	5.735197	5%	2.56	3.49

Source: Computation Output of E-views 10

At 5% significance level, the F-Statistic of 5.735197 is above both the lower bound I(0) which is 2.56 and the value of upper bound I(1) which is 3.49 thus we reject the null hypothesis. Therefore, the result above indicates that there is a long run relationship between the variables. Stated below are the long run coefficients.

E. Long Run Estimate

Table 5 ARDL Long Run Result Coefficients for Long Run Estimation

Variable	Coefficient	Std. Error	t-Statistics	Prob.
LNRECEX	2.705618	0.913026	2.963353	0.0077
LNCAEX	0.270921	0.418129	0.647938	0.5244
LNGTREX	-1.514103	0.702439	-2.155496	0.0435
LNDBS	-0.991672	0.450688	-2.200349	0.0397

Source: Computation Output of E-views 10

$$EC = LNUUNE - (2.7056*LNRECEX + 0.2709*LNCAEX - 1.5141*LNGTREX - 0.9917*LNDBS - 0.2442)$$

The result above indicates that LNRECEX (recurrent expenditure) has positive coefficient of 2.705618, this shows that recurrent expenditure as an independent variable has positive and significant impact on unemployment rate in the long run. This does not agree with our a priori expectation.

Capital expenditure (LNCAEX) as one of the component of fiscal policy has a positive coefficient of 0.270921 indicating capital expenditure has positive relationship but insignificant impact on unemployment rate in the long run, as p-value 0.5244 is greater than 5% level

of significant. This is in contrary to theoretical expectation. It is expected that government expenditure on social amenities and productive activities add more employments and this will in turn boost the private sector investment. This suggests that the increases in government expenditure may have been mismanaged or misappropriated to non-productive sectors or non-growth ventures which have failed to create expected jobs but worsen unemployment conditions.

LNGTRES (government revenue) has coefficient of -1.514103. This reveals that government revenue has a negative and significant impact on unemployment (LNUNNE). 1% increase in LNGTRES will reduce unemployment rate by 1.5% in the long run. This agrees with the theoretical apriori expectation.

LNDBS (public debt servicing) as independent variable has a negative coefficient of -0.991672. This reveals that public debt servicing has a negative and

significant impact on unemployment (LNUNNE) as p-value 0.0397 is less than 0.05% level significant. One percent increase in LNDBS will decrease unemployment rate by 0.991672% in the long run. This is also in line with our research theoretical a priori expectation.

F. Model Diagnostic Test

➤ *Test for Heteroskedasticity*

Table 6 Heteroskedasticity Test Results: Breusch-Pagan-Godfrey/LM Test

F-statistic	0.739837	Prob. F(13,20)	0.7074
Obs*R-squared	11.04090	Prob. Chi-Square(13)	0.6074
Scaled explained SS	8.411876	Prob. Chi-Square(13)	0.8158

Source: Computation Output of E-views 10

➤ *Decision Rule*

If the p-value of Obs*R-squared > 5%, we accept null hypothesis.

If the p-value of Obs*R-squared < 5%, we reject the null hypothesis.

As it can be seen from table 4.6, the p-value of the Obs*R-squared is 0.6074. Therefore, since the p-value (0.6074) is greater than 5%, then we accept the null hypothesis (H₀) and conclude that the model is homoscedastic.

➤ *Serial Correlation/ Autocorrelation*

Table 7 Breusch-Pagan-Godfrey/LM Test Results for Serial Correlation

F-statistic	0.907202	Prob. F(2,18)	0.4213
Obs*R-squared	3.113379	Prob. Chi-Square(2)	0.2108

Source: Computation Output of E-views 10

If the p-value of Obs*R-squared > 5%, we accept null hypothesis.

The null hypothesis that there is no serial association is not rejected based on table 4.7. Consequently, we draw the conclusion that the calculated model does not include serial correlation. This is because we accept the null hypothesis of the test, which states that there is no autocorrelation, as the probability value of Obs*R-squared for the test is 0.2108, which is higher than the 5 percent significance level.

➤ *Normality Test*

The purpose of the normality test is to determine if the stochastic error term is regularly distributed. Only when the Jarque-Bera statistics' p-value is less than 0.05 is the hypothesis that the residual is normally distributed rejected. The null hypothesis cannot be ruled out based on the Jarque-Bera statistics of 3.402702 with a probability of 0.182437 shown in the figure below. Consequently, we draw the conclusion that the residual has a normal distribution.

Table 8 Normality Test Outcomes

Normality test	Value
Jarque-Bera	3.402702
Probability	0.182437

Source: Computation Output of E-views 10

The result of the normality test in table 4.8 indicates that the error terms are normally distributed.

➤ *Test for Stability*

The purpose of this test is to evaluate the model's stability and suitability. A long-term decision-making tool used to determine if a model is stable is the Cumulative Sum (CUSUM) test. The null hypothesis that all parameters are stable cannot be rejected if the plot of the CUSUM remains inside the 5% critical constraint. Figure 4.1 presents the CUSUM test result. The plot lies inside the five percentile.

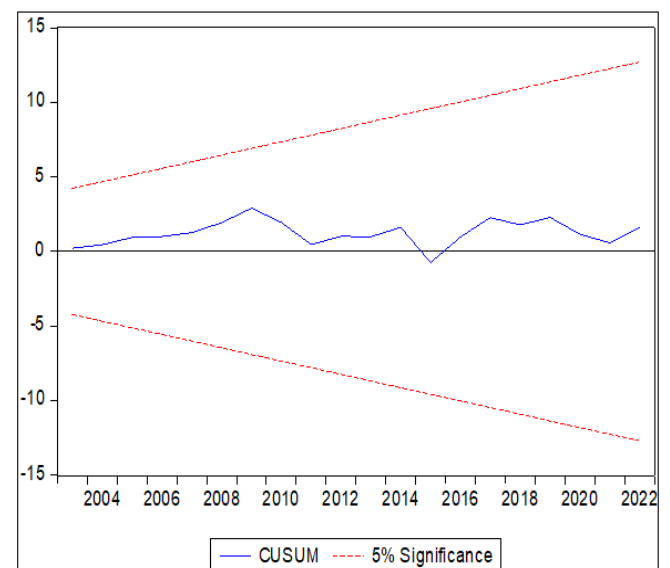


Fig 1 Result of CUSUM Test

Source: Computation Output of E-views 10

V. CONCLUSIONS AND RECOMMENDATIONS.

A. Conclusion

The main focus of the article is how Nigeria's unemployment rate is affected by fiscal policy. Unemployment is a measure of an economy's progress. Thus, in order to address the issue of unemployment, a well-articulated policy must be adopted. The study's findings demonstrated that there is an equilibrium link over the long term between government revenue, capital expenditures, recurrent spending, public debt service, and unemployment in Nigeria. Additionally, the analysis showed that, within the current study period, there is a statistically significant positive correlation between recurrent spending and the unemployment rate. However, recurring spending has a large and short-term negative impact on unemployment in periods one and two. Over time, recurrent spending significantly and favorably affected the unemployment rate in the long run.

In short run, capital expenditures had a negative but insignificant impact on unemployment. Although capital expenditures have a insignificant but positive long-term link with the unemployment rate. In the present era, government money significantly and favorably affects unemployment. Despite this, government revenue in period 1 has a short-term negative and large influence on unemployment. However, over time, government revenue has a major and detrimental impact on Nigeria's unemployment rate. Both in the short and long terms, public debt servicing has a negative and considerable impact on unemployment in Nigeria.

The findings depict that the recurrent expenditure and capital expenditure contribute minimally to unemployment reduction compared to government revenue and public debt servicing, these two variables of government revenue and public debt servicing contribute much more to minimize unemployment. This is perhaps due to fact that recurrent expenditure is vulnerable to embezzlement and capital expenditure which is not meant for immediate consumption is more prone to misuse and corruption.

The resultsof this paper suggests that the problem of misallocation and mismanagement of government expenditure calls for a comprehensive approach in the allocation and management of expenditure as it generates different unfavourable impact on unemployment in the Nigerian economy. It is expected that the effects of recurrent expenditure, capital expenditure, government revenue and public debt servicing on unemployment in Nigeria would bring concrete improvement in the welfare of the individuals and the entire economy; unfortunately what is available in reality is less than expectation. Therefore, from the study, recurrent expenditure, capital expenditure, government revenue and public debt servicing are generally effective theoretically, but it has inherent limitations in reality that often gradually undermine its impact in Nigeria.

B. Recommendations

The results of the paper have important policy implications which led to make the following recommendation that:

The influence of government revenue on employment outcomes suggests that people should retain a larger portion of their income to stimulate private entrepreneurship and investment. This would create more options for the jobless labor force in Nigeria to find work.

Government expenditures on the creation of social amenities is also anticipated to improve industrial production, which has the potential to draw in additional foreign direct investment. The expansion in these kinds of corporate investments is a solution to the employment crisis. In order to revive the non-oil industry, the government should allocate more resources and focus more on manufacturing, agriculture, and other export-oriented economic sectors. This might lead to increased employment and self-sufficiency.

The study also suggested that borrowed money only be used for the intended productive uses because paying down public debt has a substantial and detrimental impact on unemployment in Nigeria. It is imperative for policy makers to exhibit a high level of proficiency in managing government expenditures to guarantee that capital and recurring spending are appropriately and efficiently managed to achieve their intended goals. In this approach, the government may avoid long-term project abandonment by carefully planning projects before they are implemented. This emphasizes the necessity of responsibility, honesty, and openness in the use of public funds. Cost-benefit analyses should be performed by the economy whenever new initiatives are being considered in order to minimize wasteful resources.

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